DATA-TRANSFER SYSTEM

This invention relates to systems for the transfer and interchange of data between at least two populations of persons.

Such systems are known. In particular, U.S. Pat. No. 3,702,464 describes a system comprising:

on the one hand at least one portable device including a memory,

on the other hand, a plurality of geographically separated peripheral units connected to a central computer comprising a central recording memory.

The peripheral units comprise control means allowing control of the data between the central memory of the computer and the portable device, provided that this latter is coupled to one of the peripheral units.

Such a system, whatever the degree of organisation of the portable devices, of the peripheral units and of the central computer, presents a major inconvenience. In practice, it requires a network of complex interconnections between the central coordinating station and the peripheral units. As a result the installation costs are high and on the other hand the reliability is compromised by the likelihood of faults arising in the interconnecting network, the probability increasing as the complexity of the network increases.

It is an object of the invention to overcome the inconvenience of the known system, while permitting data from geographically disparate sources to be connected up to a central organism in an economic and reliable manner.

To remedy the inconvenience of the known systems it is proposed, contrary to the tendency towards centralisation which are dominant at the present time, to construct a plurality of independent devices, each autonomous, comprising means (writing means, etc.) permitting data to be transferred between the portable device and a cooperating apparatus at any position.

Thus, in accordance with a principal characteristic of the invention, a system for exchanging and transferring data between at least two populations of persons, the persons of each of these two populations being geographically dispersed, comprises:

a plurality of independent data recording devices, distributed at definite geographical positions,

a plurality of portable electronic devices, distributed among and carried by the persons constituting one of the populations.

Each of the portable devices comprises:

a memory; preferably this memory is incorporated in an inaccessible manner in the interior of the portable device; preferably likewise the memory is inert, not requiring a power supply, and of a semi-conductor type,

coupling means permitting any one of the portable devices to be temporarily coupled at will with one of the data recording devices or with one of the writing devices,

memory control circuits interconnected between the coupling means and the memory;

the memory and the control means being constructed in the form of logic microstructures.

The portable devices are arranged to store the data to be transferred in a readily portable form.

Each data recording device comprises:

a means for reading the contents of the memory in a portable electronic device while the latter is coupled with a data recording device.

means for recording the data contents of the memory in the portable electronic device which is coupled with the said reading means.

With this combination of means, each person may receive, in the form of a recording, the contents of the memories of each of the portable electronic devices without it being necessary to pass through the intermediary of a central computer.

In addition, so that each person of one of the population may be able to receive the data of persons of the other population and vice versa, the system additionally comprises, in accordance with an additional feature of the invention, a plurality of independent writing devices; distributed in geographically fixed positions; in addition, the memory of the portable electronic device possesses programmable recording sections; each writing device includes a writing means permitting data to be written into the programmable memory of the electronic portable device when this latter is coupled to the writing device. With this combination of supplementary means it is possible to write data into the memory of each of the electronic portable devices.

Preferably, the means for writing, reading and recording are interconnected and contained in a single transfer device. This is particularly the case for the applications envisaged hereinafter, but this particular arrangement is not essential.

Such a system may be employed for various purposes; its use for keeping a health record may be envisaged;

the patient possesses a health record (in the form of a portable electronic device) containing in the memory the various medical details which concern him,

the doctor whom he goes to consult who is not necessarily his usual doctor — possesses a specific data recording device which allows him to read the contents of the memory of the record and to record in another memory at his disposition the information of which he has need to make his diagnosis and then to write into the memory of the health record the most recent medical information concerning the patient.

In accordance with another principal object of the present invention the data recording means comprises:

on the one hand a writing means situated in the interior of the specific recording means,

on the other hand at least one portable electronic device comprising a memory having programmable memory sections, especially sections programmable in an irreversible manner; preferably this memory is an inert memory, not requiring a power supply, of the semiconductor type; preferably likewise it is incorporated in an inaccessible manner in the interior of the said portable electronic device,

coupling means accessible on the exterior of the portable electronic device connected with the memory and permitting it to be temporarily coupled at will with the writing means of the said recording means,

memory control circuits interconnected with the coupling means and the memory,

the memory and the control means being constructed in the form of logic microcircuits, i.e. micro-structures.